Complete Summary

TITLE

Advanced chronic kidney disease (CKD): percent of patients with qualified nutritional counseling.

SOURCE(S)

Renal Physicians Association. Appropriate patient preparation for renal replacement therapy. Rockville (MD): Renal Physicians Association; 2002 Oct 1. 78 p. (Clinical Practice Guideline; no. 3).

Brief Abstract

DESCRIPTION

This measure assesses the percent of patients with qualified nutritional counseling among patients with advanced chronic kidney disease (CKD) and evidence for malnutrition determined to be due to CKD.

RATIONALE

Nutritional interventions are commonly advised for patients with chronic kidney disease (CKD). A major goal of these interventions is to retard the progression of kidney disease and therefore delay the need for renal replacement therapy (RRT). To achieve this goal, the standard recommendation has been to restrict the intake of dietary protein, especially animal protein. This recommendation is based on animal studies that have shown that higher dietary intakes of protein can accelerate the progression of CKD, and in turn, restriction of dietary protein intake has been shown to slow progression of CKD. Another major goal of low-protein diets (LPDs) is to reduce the symptoms of uremia, metabolic acidosis and hyperphosphatemia that occur as CKD inevitably progresses.

Results from higher quality studies in humans with CKD are inconclusive regarding the beneficial effects of these diets on the progression of kidney disease; they also suggest that patients on lower protein diets may be at risk for malnutrition. For these reasons, the use of low-protein diets in CKD patients remains controversial.

Nutritional interventions have several other important goals. Regardless of prescribed diet, CKD patients are at risk for malnutrition, generally because of inadequate energy and protein intake resulting from decreased appetite. Therefore, many nutritional interventions recommend an increase in energy intake. Another goal is prevention of hyperphosphatemia; therefore it is often recommended that CKD patients restrict intake of organic and inorganic

phosphates. Other nutritional interventions focus on the prevention of bone disease, vitamin and mineral deficiencies, and hyperlipidemia.

Two large, one medium-sized, and one small observational studies provide evidence to suggest that malnutrition in this population may be a function of decreased protein and energy intake. Most diet intervention studies in this population have emphasized energy intakes greater than 30 kcal/kg body weight/day. In addition, most studies evaluating a LPD did not limit protein intake much lower than 0.6 g/kg body weight/day. It was the opinion of the measure developer that patients with signs of malnutrition should have protein intakes at least this high.

PRIMARY CLINICAL COMPONENT

Advanced chronic kidney disease; malnutrition; diet assessment; nutritional counseling

DENOMINATOR DESCRIPTION

The number of adult patients with advanced chronic kidney disease (CKD), not currently receiving renal replacement therapy, and evidence for malnutrition determined to be due to CKD

NUMERATOR DESCRIPTION

The number of patients from the denominator with qualified nutritional counseling

Evidence Supporting the Measure

PRIMARY MEASURE DOMAIN

Process

SECONDARY MEASURE DOMAIN

Not applicable

EVIDENCE SUPPORTING THE MEASURE

A clinical practice guideline or other peer-reviewed synthesis of the clinical evidence
A formal consensus procedure involving experts in relevant clinical, methodological, and organizational sciences
A systematic review of the clinical literature

NATIONAL GUIDELINE CLEARINGHOUSE LINK

- Appropriate patient preparation for renal replacement therapy.

Evidence Supporting Need for the Measure

NEED FOR THE MEASURE

Unspecified

State of Use of the Measure

STATE OF USE

Pilot testing

CURRENT USE

Internal quality improvement

Application of Measure in its Current Use

CARE SETTING

Ambulatory Care
Physician Group Practices/Clinics

PROFESSIONALS RESPONSIBLE FOR HEALTH CARE

Physicians

LOWEST LEVEL OF HEALTH CARE DELIVERY ADDRESSED

Individual Clinicians

TARGET POPULATION AGE

Age greater than or equal to 18 years

TARGET POPULATION GENDER

Either male or female

STRATIFICATION BY VULNERABLE POPULATIONS

Unspecified

Characteristics of the Primary Clinical Component

INCIDENCE/PREVALENCE

Unspecified

ASSOCIATION WITH VULNERABLE POPULATIONS

Unspecified

BURDEN OF ILLNESS

Three large and three small observational studies have demonstrated that patients with advanced chronic kidney disease (CKD) are at risk for malnutrition (decline in body weight, serum albumin, and other markers), and that this risk increases as glomerular filtration rate (GFR) declines. Furthermore, low serum albumin has been associated with increased mortality in end-stage renal disease (ESRD).

EVIDENCE FOR BURDEN OF ILLNESS

Abdullah MS, Wild G, Jacob V, Milford-Ward A, Ryad R, Zanaty M, Ali MH, el Nahas AM. Cytokines and the malnutrition of chronic renal failure. Miner Electrolyte Metab 1997;23(3-6):237-42. PubMed

Curtin RB, Lowrie EG, DeOreo PB. Self-reported functional status: an important predictor of health outcomes among end-stage renal disease patients. Adv Ren Replace Ther 1999 APR;6(2):133-40.

DeOreo PB. Hemodialysis patient-assessed functional health status predicts continued survival, hospitalization, and dialysis-attendance compliance. Am J Kidney Dis 1997 Aug;30(2):204-12. [26 references] PubMed

Gentile MG, Fellin G, Manna GM, D'Amico G. Effects of dietetic manipulation on the control of blood pressure and on the progression of chronic renal insufficiency. Scand J Urol Nephrol 1988;108:13-5. PubMed

Greene T, Bourgoignie JJ, Habwe V, Kusek JW, Snetselaar LG, Soucie JM, Yamamoto ME. Baseline characteristics in the Modification of Diet in Renal Disease Study [corrected and republished article originally printed in J Am Soc Nephrol 1993 May;3(11):1819-34]. J Am Soc Nephrol 1993 Nov;4(5):1221-36. [28 references] PubMed

Kopple JD, Greene T, Chumlea WC, Hollinger D, Maroni BJ, Merrill D, Scherch LK, Schulman G, Wang SR, Zimmer GS. Relationship between nutritional status and the glomerular filtration rate: results from the MDRD study. Kidney Int 2000 Apr;57(4):1688-1703. PubMed

Lowrie EG, Huang WH, Lew NL. Death risk predictors among peritoneal dialysis and hemodialysis patients: a preliminary comparison. Am J Kidney Dis 1995 Jul;26(1):220-8. PubMed

Woodrow G, Oldroyd B, Turney JH, Tompkins L, Brownjohn AM, Smith MA. Whole body and regional body composition in patients with chronic renal failure. Nephrol Dial Transplant 1996 Aug;11(8):1613-8. PubMed

UTILIZATION

Unspecified

COSTS

Unspecified

Institute of Medicine National Healthcare Quality Report Categories

IOM CARE NEED

Living with Illness

IOM DOMAIN

Effectiveness
Patient-centeredness

Data Collection for the Measure

CASE FINDING

Users of care only

DESCRIPTION OF CASE FINDING

Adult patients 18 years and older with advanced chronic kidney disease (CKD) and evidence for malnutrition determined to be due to CKD

DENOMINATOR (INDEX) EVENT

Clinical Condition

DENOMINATOR INCLUSIONS/EXCLUSIONS

Inclusions
Adult patients age 18 years and older with chronic kidney disease (CKD) stage 4 or 5 (glomerular filtration rate [GFR] less than or equal to 30 mL/min/1.73 m^2), not currently receiving renal replacement therapy, with evidence for malnutrition* determined to be due to CKD

*Evidence of malnutrition due to CKD:

- An unintentional decline in body weight by more than 5%,
- Decrease in serum albumin by more than 0.3 g/dL or is less than 4.0 g/dL (for Bromo-Cresol-Green assay or 3.7 for Bromo-Cresol-Purple assay), and
- All other causes of malnutrition are ruled out

Note: Other markers of nutritional status could also be used.

Exclusions
Unspecified

NUMERATOR INCLUSIONS/EXCLUSIONS

Inclusions
The number of patients from the denominator with qualified nutritional counseling*

*Qualified nutritional counseling is diet assessment and counseling by qualified personnel.

Exclusions
Unspecified

DENOMINATOR TIME WINDOW

Time window precedes index event

NUMERATOR TIME WINDOW

Episode of care

DATA SOURCE

Administrative data
Laboratory data
Medical record
Patient survey

LEVEL OF DETERMINATION OF QUALITY

Individual Case

PRE-EXISTING INSTRUMENT USED

Unspecified

Computation of the Measure

SCORING

Rate

INTERPRETATION OF SCORE

Better quality is associated with a higher score

ALLOWANCE FOR PATIENT FACTORS

Unspecified

STANDARD OF COMPARISON

Internal time comparison

Evaluation of Measure Properties

EXTENT OF MEASURE TESTING

Unspecified

Identifying Information

ORIGINAL TITLE

Number of patients with qualified nutritional counseling / number of patients with advanced CKD and evidence for malnutrition determined to be due to CKD.

MEASURE COLLECTION

Renal Physicians Association Clinical Performance Measures on Appropriate Patient Preparation for Renal Replacement Therapy

MEASURE SET NAME

Renal Physicians Association Clinical Performance Measures for Nutrition Recommendations

DEVELOPER

Renal Physicians Association

ADAPTATION

Measure was not adapted from another source.

RELEASE DATE

2002 Oct

MEASURE STATUS

This is the current release of the measure.

SOURCE(S)

Renal Physicians Association. Appropriate patient preparation for renal replacement therapy. Rockville (MD): Renal Physicians Association; 2002 Oct 1. 78 p. (Clinical Practice Guideline; no. 3).

MEASURE AVAILABILITY

The individual measure, "Number of patients with qualified nutritional counseling / number of patients with advanced CKD and evidence for malnutrition determined to be due to CKD," is published in "Renal Physicians Association Clinical Practice Guideline #3: Appropriate Patient Preparation for Renal Replacement Therapy."

For more information, contact RPA at 1700 Rockville Pike, Suite 220, Rockville, MD 20852; phone: 301-468-3515; fax: 301-468-3511; Web site: www.renalmd.org; e-mail: rpa@renalmd.org.

NQMC STATUS

This NQMC summary was completed by ECRI on May 23, 2003. The information was verified by the Renal Physicians Association on June 17, 2003.

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